

Claims:

1. A fluid filter (1), in particular an oil or fuel filter for an internal combustion engine, comprising a filter socket (10) designed with a mounting flange (21) that can, in a sealing manner, be connected to a companion flange (41) on an associated apparatus (4), in particular on an internal combustion engine, wherein at least one fluid duct (13) for supplying fluid to be filtered from the apparatus (4) to the fluid filter (1) and one fluid duct (14) for discharging filtered fluid from the filter (1) to the apparatus (4) extends through said flange connection (2), wherein, in the filter socket (10), at least one section (24) of at least one fluid duct (14) can be closed off against the companion flange (41) by means of a sealing plate (3) designed with at least one through opening (34) that is sealed against the companion flange (41) and is arranged flush with an apparatus-side fluid duct (44),  
c h a r a c t e r i z e d i n t h a t  
the surface area of the sealing plate (3), as seen on the plane (20) of the flange connection (2), is smaller than the surface area of the mounting flange (21) and that the sealing plate (3) is inserted in the filter socket (10) in a sealing manner and forms a part of the filter socket (10).

2. A fluid filter according to Claim 1, characterized in that, as a third fluid duct, an unpressurized drain duct (15) for draining the fluid filter (1) on replacement of the filter element extends through the flange connection (2).
3. A fluid filter according to Claim 1 or 2, characterized in that two or three separate sealing plates (3) are provided, wherein one sealing plate (3) is each allocated to one or two of the fluid ducts (13, 14, 15) extending through the flange connection (2).
4. A fluid filter according to anyone of Claims 1 through 3, characterized in that the filter socket (10) and the sealing plate(s) (3) are plastic parts and that the sealing plate(s) (3) is/are welded or glued to be connected to the remaining filter socket (10).
5. A fluid filter according to Claim 4, characterized in that the sealing plate(s) (3), at its/their through opening(s) (34), is/are (each) provided with a pipe socket (35) with a radially acting sealing ring (35'), wherein said pipe socket (35) projects towards the companion flange (41) and can be inserted in the apparatus-side fluid duct (44).
6. A fluid filter according to Claim 1 or 2, characterized in that the filter socket (10) and the sealing plate(s) (3) are parts made of plastic or of metal and that the sealing plate(s) (3) is/are inserted in the remaining filter socket (10) and fixed therein, with a peripheral, radially or axially acting sealing ring (31) being placed

intermediate the filter socket (10) and (each of) the sealing plate(s) (3).

7. A fluid filter according to Claim 5 or 6, characterized in that the radially acting sealing rings (31, 35') are standard O-rings.
8. A fluid filter according to Claim 6 or 7, characterized in that the sealing plate(s) (3), at its through opening (34) or their through openings (34), is/are (each) designed with an axially acting sealing ring (36') surrounding said through opening(s) (34) and projecting in the direction of the companion flange (41).
9. A fluid filter according to anyone of the preceding claims, characterized in that a peripheral axially acting seal (22) is provided in parallel to the outer contour of the mounting flange (21) and arranged therein, said seal (22) enclosing the through opening(s) (34).
10. A fluid filter according to Claim 9, characterized in that the seal (22) simultaneously seals the fluid duct(s) (13, 15) in the flange connection (2) that is/are not extending through the through opening(s) (34) in the sealing plate (3).
11. A fluid filter according to Claim 9, characterized in that the fluid duct(s) (13, 15) not extending through the through opening(s) (34) in the sealing plate (3) or sealing plates (3) is/are (each) separately sealed by its/their own sealing means and that the seal (22) encloses the fluid duct(s) (13, 15) in the flange connection (2) not extending

through the through opening(s) (34) in the sealing plate (3).

12. A fluid filter according to anyone of Claims 8 through 11, characterized in that the axially acting seals (22, 36') are sectional seals.
13. A fluid filter according to anyone of Claims 4 through 8, characterized in that the plastic is polyamide and that the filter socket (10) or a filter housing (11) comprising the socket (10) and the sealing plate(s) (3) are produced as injection-molded parts.
14. A fluid filter according to anyone of Claims 6 through 8, characterized in that the metal is aluminum or magnesium and that the filter socket (10) or a filter housing (11) comprising the socket (10) and the sealing plate(s) (3) are produced as die casting parts.

Summary:

The invention relates to a fluid filter (1) comprising a filter socket (10) with a mounting flange (21) that can, in a sealing manner, be connected to a companion flange (41) on an associated apparatus (4), wherein at least one fluid duct (13) for supplying fluid to be filtered and one fluid duct (14) for discharging filtered fluid extends through said flange connection (2), wherein, in the filter socket (10), at least one section (24) of at least one fluid duct (14) can be closed off against the companion flange (41) by means of a sealing plate (3) designed with at least one through opening (34) that is sealed against the companion flange (41) and is arranged flush with an apparatus-side fluid duct (44). Therein, it is provided that the surface area of the sealing plate (3), as seen on the plane (20) of the flange connection (2), is smaller than the surface area of the mounting flange (21) and that the sealing plate (3) is inserted in the filter socket (10) in a sealing manner and forms a part of the filter socket (10).

Reference drawing figure of the summary: Figure 1